

The Planters' Chronicle.

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THE U. P. A. S. I.

(INCORPORATED.)

Contents.

We would beg to remind readers that the registered address of the Secretary of the United Planters' Association is "Planting" and that the use of this by those who have occasion to wire to him will save many annas in the course of the year.

Mr Anstead, Planting Expert, is expected to return to Head Quarters on Monday next, 16th instant.

The Proceedings of the West Coast Planters' Association are printed, also those of the North Mysore Planters' Association.

It is to be hoped that Sprayers have also been ordered for the Insecticides for without them the latter will not be of much use. It will be like Hamlet with the part of Hamlet left out.

The Experimental Research Record of the United States Agricultural Department supplies us with an article on "The way it is done in America" which shows how far ahead they are to anything in the Empire though the latter are slowly awakening to the fact that without scientific aid and guidance, not much progress is to be made.

But for the mistake made at Kew the Tea Industry would be twenty years ahead of what it is at present, and the article on "The Indian Tea Industry" is interesting reading and reads as the writer says, more as a romance than as a dry history of fact.

On application to these offices a Bulletin on the "Labour Question" can be procured. It consists of cuttings from various papers dealing with this important question and not only shows how difficult is the solution of it, but it also shows that the minds of many men in many countries are considering the best way to settle it.

The Annual Meeting of the U. P. A. S. I. will probably be held on August 23th and an Exhibition of Products at the same time.

DISTRICT PLANTERS' ASSOCIATIONS.**West Coast Planters' Association.**

Proceedings of a General Meeting held at Palapilly, Cochin, on the 3rd June, 1913.

PRESENT.—Central Malabar Syndicate per, Mr. V. L. Travers Drapes.
 Mooply Valley Rubber Co. " Mr. E. H. Halliley.
 Mysore Rubber Syndicate " Mr. C. W. Clode.
 Pudukad Rubber Co. " Mr. H. C. Plowden,
 Pullangode Rubber Estate " Mr. H. Waddington, Hon. Secy.

Visitors.—Messrs. T. B. Ashworth, R. T. Bowles, T. Dixon, J. A. Ellis, E. S. Halliley, C. L. McLean and H. J. Walmesley.

Chairman.—In the absence of Mr. Hunt, Mr. C. W. Clode was voted to the Chair.

The Proceedings of last Meeting, inclusive of Rules passed thereat, were confirmed.

Statement by Honorary Secretary.—Recorded. He was asked to print the same with the Proceedings.

The last meeting of the Association was held at Calicut on the 25th January, at which the Annual Report and Accounts made up to 31st December, 1912 were submitted.

I took over the Secretaryship from Mr. Plowden, but owing to papers and books going astray on the Railway, there was considerable delay in publishing and sending copies of the Proceedings to members. These, however, were sent out on the 2nd March and were followed shortly afterwards by copies of New Rules and Accounts.

Of the Rules I have only to explain, that after full enquiry and learning there was no other Association with a similar title, I adopted the new name of the Association, as approved at the last Meeting.

From copies of Accounts, circulated, you will have seen we closed last year with an apparent balance of Rs.190-7-10. After due consideration for reasons given below, the Committee decided to write off as irrecoverable the amounts shown in that account as due by Mr. P. L. Joseph and members Rs.35. The amount due by Joseph appears to be a balance of a sum of Rs.60 advanced to a clerk on 21st October, 1911. Owing to legal difficulties it is not considered worth while to take a civil suit, but I trust if any member of this Association employ the man, they will recover the amount for us. The amount due by members was Rs.10 each, shown as due by Messrs. Kirk and Horsfall. A letter exists in the file showing Mr. Kirk tendered his resignation on the 5th January 1912 and we do not think, therefore, that he should be expected to pay subscription for that year. Similarly, although we are unable to trace any letter, we accept Mr. Horsfall's claim that he resigned at the same time, the letter may have been lost after receipt. The actual balance we closed the year with was accordingly, Rs.155-7-10, but this result was only attained owing to refund of Rs.331-10-8 received from the Rubber Exhibition Fund, an item of income we shall not receive in future. The financial position was not, therefore, really sound, and in order to make it so, although they contemplated increased area coming in, and that with formation of branches, expenditure of this Association would not be as much as in previous years, your Committee decided to levy assessment at same rate as last year, namely 1½ annas per cultivated acre. From the Accounts, made up to 31st May, laid on the table, you will see that we are now, as far as can be foreseen, in a fairly sound position. When all subscriptions are paid up, we should have Rs.1,147 to meet the expenditure of the last seven months of the year, which is estimated at Rs.700.

Since the date of our last meeting, the Eddivanna Rubber and Tea Company have joined the Association, and although our figures are not quite complete, as there are still two Estates in arrears with subscription and declaration as to present cultivated area, the acreage represented by this Association is about 13,215 acres under Rubber. I trust this will be increased to 15,000 before the end of the year.

As instructed at last meeting, I forwarded our subscription to Lady Amphilh Nurses' Institute, and all members of the Association are entitled to benefits thereof. I am asked to furnish a complete list of members, but have been unable to do so yet, as all estates have not made the return for which I asked, as to names of Assistants employed.

On the 15th March, a Cochin Branch Association was formed with a starting membership of 14, and I will ask you later to confirm acceptance of this as a recognised affiliated Association.

We were asked if we wished to bring any special matter before the Tea Cess Committee, a meeting of which was held on the 14th March, but whether our representative attended or not, I have not been informed. Our opinion was asked as to whether, if an Indian Gold Coin were introduced, it should be of the value of Rs.10 or Rs.15, to which I replied with the consent of the Committee, that we considered Rs.10 the more suitable as likely to work in with a decimal system. We are asked to advise the Acting Chief Secretary to Government names of any gentlemen wishing to appear before, and give evidence to, the Indian Finance and Currency Commission. The Deputy Inspector-General of Police advocates detail descriptive marks of Maistries and coolies being recorded, and a copy of such record being sent with all warrants.

To avoid repetition I have refrained from mentioning other matters which have come before the Association during the last five months, as they appear in the Agenda for this Meeting and can be explained and discussed in due course.

Owing to the great distances at which we are situated, the Committee have been unable to hold any actual Meetings, but I have been in close touch and constant communication with the Chairman. I was able to visit Mr. Plowden on his return from Australia, and by means of circular letters I have kept the members of the Committee informed of what business was in hand and received their instructions. I trust under the difficulty of the circumstances, they have found the arrangement satisfactory.

(Signed) H. WADDINGTON.

Honorary Secretary.

Cochin Branch.—This under the title of the "Cochin Planters' Association" was accepted as an affiliated Association and recognised Branch.

Having incurred certain expenditure on stationery and rubber stamps under the title of "West Coast Planters' Association—Cochin Branch," the Honorary Secretary was instructed to pay them any expenses incurred owing to change of title.

Membership.—It was explained that of the 29 Private members shown in previous reports, only 17 appeared to have ever paid any subscription, of these 4 have resigned. Resolved:—That only the names of those gentlemen who have paid subscriptions in 1912 shall be retained on the records as "Private Members."

It was considered that it was undesirable that managers of estates should also be entitled to private membership, all such members have expressed a wish to discontinue their dual membership, but as this involved alteration of Rules which cannot be done without notice, notice was given that at

the next Meeting a proposition will be brought forward to insert the words :— "Not already having a vote as representative through an estate subscription" between the words "person" and "duly" in Rule I. The list of Honorary Members was confirmed, but from date Honorary Members will be recorded by name and not by office as heretofore."—Carried *nem con.*

Records.—Recorded that the Honorary Secretary had destroyed certain old papers, valueless for purpose of record. His action was confirmed. Recorded with regret the Honorary Secretary's report that the letter filed prior to 1911 had been destroyed by white ants.

U. P. A. S. I.—Delegates Mr. Waddington and Mr. Hunt were elected as delegates to the Conference of U. P. A. S. I. at Bangalore next August, but if either is unable to go, it be left to the Committee to select others. Proposed by Mr. Plowden, seconded by Mr. Clode.—Carried.

Instructions to Delegates.—The delegates were instructed to promise subscription up to the same rate as at present for 1913-1914 to U. P. A. S. I. and Scientific Officer Fund. They are not to pledge this Association to any definite labour scheme or legislation. The delegates be allowed to use their own discretion with regard to continuation of Scientific Officer Scheme. Any further definite instructions will be given before the date of meeting by the Committee.

Southern Indian Planters' Benevolent Fund.—The Honorary Secretary called attention to the considerable falling off of support to this in recent years. Amount paid through Association was in 1910, Rs.230, in 1911, Rs.135, in 1912, Rs.70, promised so far in 1913, Rs.25. Subscription was promised by ten planters present.

Rubber Theft Act.—This matter comes before the Meeting at the suggestion of Mr. Hunt who wishes the matter again taken up and kept separate to the question of protection for tea, pepper and cardamoms. The Honorary Secretary was requested to ascertain if a Rubber Theft Act is in force in Travancore, and if so, to ask the Cochin Durbar if they will pass or have passed similar legislation. *Wide Association Proceedings* 6th May, 1911, and the delegates were asked to bring matter up at Bangalore.

Contracts between Maistry and Cooly.—Read correspondence between Mr. Hunt and the Magistrate at Manjeri, in which the Magistrate states that he doubts whether Act XIII is applicable to cases of contract between Maistries and coolies and refuses the issue of warrant on the complaint of a Maistry till he has referred to the Divisional Magistrate, Malapuram. Further letter from the Magistrate stating that the Divisional Magistrate has ordered that a Maistry or middle man is not entitled to take proceedings unless he is a person acting on behalf of his master or employer.

Read letter from the Honorary Secretary to the Divisional Magistrate, Malapuram, pointing out that the last ruling does not meet the question in dispute, as in the case under consideration the Maistry, not the Estate, is the employer. Resolved: That the matter be postponed till the next meeting when the Association can consider the reply to the Hon. Secretary's letter.

A cordial vote of thanks was passed to Mr. McLean for the use of his bungalow for the Meeting.

With a vote of thanks to the Chair, the meeting terminated.

(Signed) C. W. CLODE,
Chairman.

(") H. WADDINGTON,
Hony. Secretary.

North Mysore Planters' Association.

*Proceedings of the Third Quarterly Meeting held at Balehounnâ
on June 3rd, 1913.*

PRESENT.—Messrs. C. Danvers, R. G. Foster, E. H. Young, C. P. Reed, A. F. Evveta, F. W. Hight, Thos. Hunt (President), and W. H. Read (Honorary Secretary.) Mr. J. Clifford (Visitor).

Madras Act No. I of 1903.—Proposed by Mr. C. Danvers and seconded by Mr. C. P. Reed: "That this Association is prepared to accept the Madras Planters' Labour Act No. I of 1903, provided extradition goes with it, and that the Mysore Government adopt certain modifications to suit local requirements. Such modifications to be drawn up in consultation with the "Council of Mysore Planting Association."—Carried unanimously.

Green Bug.—This subject was discussed, and it was decided that every member be asked to lay in a stock of Insecticide (soap, soda and rosin) so as to be prepared should the pest appear in N. Mysore.

Delegate to U. P. A. S. I.—Mr. Hunt was elected to represent this Association.

A vote of thanks to the Chair closed the meeting.

(Signed) W. H. REED,
Hony. Secretary.

INDIA-RUBBER; GUTTA-PERCHA.

Plantation Rubber in 1912. W. Frendenberg. Gummi. Zeit., 1913, 27, 1005-1006.

The imports of raw rubber into England in 1910, 1911, and 1912 were 43,849, 45,298 and 55,023 tons respectively. The exports were 23,394, 28,562 and 36,298 tons, being respectively 53, 63 and 66 per cent. in weight, and 57, 73, and 76 per cent. in value, of the imports. The price did not vary much in 1912. In the beginning of the year fine hard Para was 4s. 4d. per lb. and plantation rubber, 4s. 10d.; at the end of the year the prices were 4s. 5d. and 4s. 4d. The highest prices were 5s. 1d. and 5s. 6d.; the lowest were 4s. 3d. and 4s. The consumption for 1911-12 was, according to Hecht, Levis and Kahn, 99,564 tons, an increase of 25,482 tons above 1910-1911. Up to 1910 the average increase was only 5 per cent. per year. The supply for 1911-1912 is estimated as 93,667 tons against 79,305 tons in 1910-1911; visible supply on 30th June, 1912, 10,181 tons against 12,563 in 1911. Grisar and Co., and others, estimate the consumption as 103,000 tons, and supply 93,000 tons. S. Figgis and Co., estimate supply and consumption for 1912 as 99,000 tons. The total export of the Malay Peninsula for 1912 was 22,353 tons against 11,490 in 1911. The total from Ceylon was 6,700 tons against 3,200 tons in 1911; about 55 per cent. of the export from Ceylon reached London. The export from S. India was 125 tons against 42 in 1911. The area planted with rubber is estimated at about 1,085,000 acres (Malaya 430,000, Ceylon 230,000). The amount of rubber expected in 1913 is 50,000 tons plantation and 65,000 wild, 115,000 tons in all (the wild rubber has about 20 per cent. more moisture).—H. E. E. P.—*Journal of the Society of Chemical Industry*

THE WAY IT IS DONE IN AMERICA.

The following account of the development of the United States Agricultural Department and the record grant allotted to it for 1913-14 is extracted from the *Experiment Station Record* for March.

The Act making appropriations for the support of the Department of Agriculture for the fiscal year ending June 30, 1914, considerably enlarges the powers and duties of the Department, provides for the maintenance and development of most of the present lines of work, and establishes a new high-water mark for the funds at its disposal. The total amount carried by the Act is \$17,986,945, an increase of \$1,335,449, or about eight per cent. over that of the present year and \$1,086,929 in excess of that for the fiscal year of 1912, which had been the highest in the history of the Department. Many of the increased allotments are designed to provide for additional administrative and police duties and the extension of the demonstration work, but opportunity is also afforded each bureau for some development of its lines of research as well. The outcome as a whole may be regarded as both significant and encouraging, indicating a sustained public interest in the work of the Department and an increased recognition of the profits accruing to the country from the consistent and uninterrupted fostering of its agricultural development.

In its general form the law conforms closely to its immediate predecessor, but in addition to the provisions of a routine nature it contains considerable new legislation. In fact, it embodies practically all of the agricultural legislation enacted at the closing session of the Sixty-second Congress. Some of the principal matters which are included are the authorization of the appointment of a Commission to investigate the subject of rural credit, a federal law for the protection of migratory game and insectivorous birds, and the regulation of commerce in serum, virus, etc., for the protection of domestic animals.

Widespread interest is now being manifested in the subject of increasing agricultural credit facilities. This interest found expression in a clause authorising the President to appoint a Commission of seven persons to co-operate with a Commission, already designated by the Southern Commercial Congress, in a study in Europe of co-operative land mortgage banks, co-operative rural credit unions, and similar organizations. This Commission is to serve without compensation, but is allowed \$25,000 for the employment of assistants and other expenses.

Another important measure to be incorporated in the Act is the so-called "McLean Bird Protection Bill." Under its provisions all wild geese, wild swans, brant, wild ducks, snipe, plover, woodcock, rail, wild pigeons, and all other migratory game and insectivorous birds which do not remain entire year within any one State, are declared to be the property of the United States Government and their capture or destruction is prohibited except under regulations to be promulgated by the Department with the approval of the President. The Department is authorised to prescribe closed seasons for these species, within which reasons violations may be punished by a fine not to exceed \$100, imprisonment for not over ninety days, or both. An appropriation of \$10,000 is made for the enforcement of these provisions, under the administration of the Bureau of Biological Survey.

In order to prevent future dissemination of dangerous diseases conveyed by contaminated materials, interstate commerce in viruses, serum,

toxins, or analogous products for the treatment of animal diseases is restricted after July 1 to products manufactured in domestic establishments licensed by the Secretary of Agriculture, or imported from foreign countries under a permit from him. The Department is authorized to make all necessary inspections and to promulgate rules and regulations, and is granted an initial appropriation of \$25,000 for its enforcement.

Nearly all of the regulatory or police functions hitherto placed upon the Department receive increased support. Thus \$200,000 additional is granted to supplement the Meat Inspection Act of 1096, which carries a permanent appropriation of \$3,000,000 per annum, and the allotment for the enforcement of the Food and Drugs Act is increased from \$625,000 to \$675,000. The maintenance of the plant quarantine is provided for with an appropriation of \$40,060, \$10,000 of which is immediately available, and the act is amended to permit of importations from quarantined countries by the Department itself for experimental or scientific purposes. Small increases are also granted for the enforcement of the Insecticide Act, making \$93,000 available for this purpose, and for the seed inspection, the scope of which is extended to include lawn grass seed.

As usual, there is considerable new legislation relative to forestry matters. The action of the previous year increasing to 35 per cent. the portion of the receipts from the National Forests to be expended locally for public schools and roads is made permanent law. Co-operation with the States under the Appalachian Forest Reserve Act of 1911 is continued with an appropriation of \$75,000, in addition to any unused balances heretofore granted, and the Act itself is amended to permit of the acquisition of lands encumbered by rights of way or other reservations not interfering with the use to which the lands would be put.

Further impetus is given to the work of segregating lands within the National Forests that may be open to entry under the homestead laws by increasing to \$100,000 the funds available for their selection. Of this amount \$35,000, together with any unexpended balance from the preceding year, is to be used for the survey and listing by Forest Service employees of these lands which are chiefly valuable for agriculture. In addition, the Bureau of Soils receives \$20,000 for similar work in co-operation with the Forest Service, and \$25,000 is granted to effect exchanges of lands and indemnity rights with the State of Montana, which is required to contribute an equal sum.

Great interest was again manifested by Congress in the Department's demonstration and extension work. An increase of \$75,000 is granted for the farm management and demonstration work, making \$375,000 available for the purpose, and an equal sum is provided for the co-operative demonstration work in the South. The campaign for the eradication of the cattle tick is stimulated by an increase from \$50,000 to \$325,000, with the proviso that none of this may be used for the construction of dipping vats or the purchase of dipping materials except for experimental or demonstration work by employees of the Bureau of the Animal Industry. An allotment of \$75,000 is made for demonstrations of the best method of combating hog cholera, and the gipsy moth campaign will receive \$300,000 as compared with \$284,840 at the present time.

Of the new lines of investigations which were authorized, the most important is that of marketing systems. It will be recalled that the previous Act directed the Secretary to collect information relative to co-operative and other systems of marketing farm products in vogue in this country, and to

make recommendations as to any further investigations of these and related questions. A comprehensive report was accordingly prepared by the Bureau of Statistics summarising existing systems and advocating the establishment of a division of markets within the Department. This division was not definitely established, but investigations were authorised under an appropriation of \$50,000, of which \$10,000 is immediately available, to enable the Secretary to acquire and disseminate "useful information on subjects connected with the marketing and distributing of farm products." He is also authorized to continue the studies under way for several years on the cost of food supplies at the farm and to the consumer.

Other new investigations for which specific appropriations are made include \$2,500 for experiments in feeding and breeding ostriches, \$10,000 for testing the waste, tensile strength, and bleaching qualities of the various standard grades of cotton, and \$30,000 for a study of corn improvement. Authority is also given for studies of insecticides and insecticide machinery.

The complete story of this remarkable epoch in our agriculture cannot here be attempted, but a summary by Dr. E. F. Smith, of the Bureau of Plant Industry, speaking as the representative of the Department at a farewell reception tendered by the employees to the retiring Secretary, may well be quoted:—

"In that sixteen years we have grown from less than twenty-five hundred persons occupied with problems for the betterment of agriculture to nearly fourteen thousand workers. We then expended less than three million dollars per annum on our work. The Bill that has recently passed Congress directs to expend nearly eighteen millions. Sixteen years ago we had very little influence at home and none abroad. To-day there is not a civilised country in the world that does not speak with respect and envy of our Department of Agriculture, and as for our standing at home, one has only to ask any well-educated farmer anywhere in this broad country."

FEDERATED MALAY STATES.

RUBBER EXPORTS DURING JANUARY-MARCH, 1913.

The following figures of the exports of cultivated rubber from the Federated Malay States during the first quarter of 1913 have been furnished by the Commissioner of Trade and Customs at Kuala Lumpur, the corresponding figures for 1912 being added for purposes of comparison:—

AGRICULTURAL AND FOREST PRODUCTS.			
		1912	1913
		Lbs.	Lbs.
January	...	2,730,576	4,772,880
February	...	2,715,767	3,936,529
March	...	3,089,558	3,891,619
Total for the Quarter	...	8,535,901	12,601,028

HAYTI.

COFFEE CROP PROSPECT.

H. M. Charge d'Affaires at Port-au-Prince (Mr. J. Pyke) reports, under date 30th April, that the Coffee crop of Hayti shows great promise, and is expected to give a larger yield than that of 1911-12, which was more than 80,000,000 lbs. — *The Board of Trade Journal*.

The Indian Tea Industry

It is difficult to realise that so recently as 1820 the tea plant was first discovered to be growing wild in Assam. On the plant being submitted for examination to the Director of Kew gardens, this gentleman declared it was not a tea plant at all, and twenty years were consequently wasted before his erroneous verdict was successfully discredited. The Assam Tea Company was then formed, and by scientific cultivation of the native plant the shareholders have now reaped a sevenfold return on their investment. The plant of Assam was afterwards introduced into Ceylon, and the fact that the Ceylon planters have been able to produce tea of the whole Chinese Republic, which held a monopoly of the tea trade for over a thousand years. The way in which the tea trade of Ceylon, Burma and the Shan States has won its way to the support tea trade of China and Japan reads more like a story of fact. Not only are they now doing more than the tea trade of China, but they are actually importing Indian and Ceylon tea of poor quality into that country. The Japanese controlling practically the whole tea trade of the East, as they did do up to quite a recent date, they are now taking up the struggle against the rivalry of Indian and Ceylon tea. With the exception of a special tea noted for its peculiar growth in Formosa, India and Ceylon are producing teas of many varieties. China cannot excel the choice tea grown on the plantations of India and the blends of cheap, pure leaf produced on the plantations of India.

Is this amazing agricultural victory due? We can write down the reasons, viz., modern science, personal enterprise, and modern power. British botanists provided our planters with a stronger and more productive shrub than the highly cultivated plant of China. Not only is the leaf twice as large, but the plant produces two crops to the one of the Chinese plant's one. And finally the botanists have taught the Indian planters how to cultivate the wild plant to the best advantage. With this the planter became a man of enterprise. The next call was upon the engineer to devise power machinery for dealing with the tea. It was not that the natives picked for him. As in all other industries this is a matter of peculiar difficulty in a country where hand labour is both abundant and cheap. But the British tea planter aimed at something which even the most cheap manual work could not accomplish. His article had to be exceptionally clean, and where the utmost markets were to be won he had to be able to turn out large quantities with clock-like regularity and always with identical qualities. These requirements spelt machinery. He knew all the weak spots in his Chinese rival's armour, and determined to avoid them in his own. The mal-practices of the Chinese, such as treating the leaves with gypsum and Prussian blue in order to increase their colour and brilliance, also enhanced the prestige of the cleanly and scientifically prepared teas of India and Ceylon, and in about twenty years, from 1885 on, the exports of Chinese tea fell off nearly 50 per cent., while those of India, Burma and Ceylon have gone on steadily rising, and now total close on 500 millions of pounds per annum. So excellently have the scientific methods and laborious enterprise of the Anglo-Indian tea industry been organised that to-day there is a common fund for advertising and other purposes, and a Council for planning campaigns of defence and offence and for the promotion of interests generally. In India alone there are about half a million acres of tea plantations. These are for the greater part situated in Eastern Bengal

and Assam. The Assam teas have become so famous that the Chinese actually label their own produce as Assam Pekoe Souchong. In Ceylon there are just under four hundred thousand acres of land planted with the tea shrub. The average size of an estate is about three hundred acres. The most modern tendency is, however, to group several plantations under one working staff, in order to reduce the expenses of working management. A large number of comparatively small estates are directed by British planters resident on the land, but very often the planter is now merely a servant of a company, and not, as he often used to be, the actual owner of the estate. Something like half a million coolies are employed on the Ceylon plantations. Whole families of men, women and children are recruited from their villages in Southern India and transported to Ceylon, and in the main these people are good workers, and from their standard receive good wages.

A new tea garden is first opened out by clearing, hoeing and trenching a piece of jungle. This forms a nursery. The ground has to be carefully fenced against the ravages of cattle and wild animals, and is then planted with seed, which has been sprouted in seed beds. Next it is thatched over to protect it from the scorching sun. Meanwhile the site of the future plantation has been cleared and hoed and roads and drains made through it. The rows in which the young tree plants are to be grown are staked out about four feet apart. The plants, when about a foot high, are carefully transplanted from the nursery in the rows of holes prepared for them. The planter has now to sit tight for three years before he will receive any return on the young plantation. All this time incessant labour will be required to keep down the vigorous tropical weeds which will assail his property. At the end of three years his plants will send out an abundance of young leaf shoots known as flush. The plucking will then be carried out at regular intervals, and the bushes will be pruned from time to time to keep them within bounds and to strengthen the growth of the flushes. In the colder climate of China and Japan the flushing ceases in the winter, but the hot, stagnant, steaming heat of the jungle causes the Ceylon plants to continue flushing throughout the year, and pickings are made every ten or twelve days. Upon the size of the leaf when picked depends the quality of the tea. In fine plucking the bud at the top of the shoot and the two young leaves just below it are taken. In medium plucking three leaves are taken with the bud. In coarse plucking four leaves and the bud are gathered. The teas made from the fine plucking are classed as Pekoes. The youngest leaves are classed Flowery Pekoe, the second leaf Orange Pekoe and the third Pekoe. From the larger leaves Souchongs and Congous are prepared, and there is also a mixture of young and old leaves which is known as Pekoe-Souchong. The beverage made from the youngest leaves is particularly fine and wholesome, and a less quantity of this tea is required to give the desired strength. After the leaves are gathered into baskets by women they are taken to the factory, and the flush is weighed. It is then thinly spread out on shelves of canvas or wire mesh, placed one above the other, where the leaf naturally withers in good weather in about eighteen hours. The withered leaves are then shot into rolling machines, where they are bruised to allow their juices to become mixed, and they are also curled or twisted. From the rolling machine the tea falls in yellow, clinging masses into a roll breaker, that breaks up the masses and drops the tea into a sifter, where the coarse leaves are separated from the younger, finer growth. Next comes the important process of fermentation, on the success of which largely depends the quality and character of the tea. Green tea, which was formerly so popular, was manufactured by omitting the fermentation process, but all black teas must be

fermented. This is done by putting the rolled leaf into drawers or on mats, which are placed one above the other so as to permit the air to freely enter and work on the bruised leaves. During fermentation the leaves emit a peculiar odour and change colour. In about two hours they attain a certain copper-brown tint, and are then fired into the drying machines, where all other fermentation is arrested by the heat. Besides checking fermentation, the firing process also removes the moisture without drying off the essential oil and other constituents that give a tea most of its value. There are many types of firing machines, but they all act by sending a current of hot dry air through the damp, fermented leaf, and make it dry and brittle. After the tea has been fired it is taken to the sorting room and sifted by a machine through a series of moving sieves of varying sizes of mesh. The siftings are classed as Flowery Orange Pekoe, Orange Pekoe and Pekoe No. 1. These are unbroken teas. The coarser leaves, which do not shoot through the meshes, are transferred to breaking machines, and are broken up and then passed through the sieves. They form the products known as Broken Orange Pekoe, Pekoe No. 2, and so on. *The Indian Planters' Gazette and Sporting News.*

COLONIES AND PROTECTORATES.

MEASURES TO PREVENT THE INTRODUCTION OF PLANT DISEASES.

The "Journal Officiel" for the 14th May contains a Presidential Decree which provides that, with a view to preventing the propagation of diseases caused by animal or vegetable parasites or by non-parasitic insects, the Minister for the Colonies may, by Decree, prohibit the importation of the plants and the plants that may be attacked thereby. The Decree prohibits the importation into the French Colonies and Protectorates of (1) plants liable to the diseases mentioned above, (2) plants with which the disease may be carried, (3) earth and soil which may contain the parasites or non-parasitic worms and insects, and (4) packings which have served for the transport of prohibited plants. The Minister may, by Decree, lay down special regulations to which the importation of plants, &c., shall be subject; and he may also regulate the importation of branches, leaves, fruits, seeds, and other parts of prohibited plants.

CEYLON.

RUBBER EXPORTS.

The following statistics of the exports of rubber of domestic production from Ceylon during the month of February and the two months ended February, 1912, and 1913, have been extracted from official returns issued by the Ceylon Government:—

To	Feb. 1912. Lbs.	Feb. 1913. Lbs.	Jan-Feb. 1912. Lbs.	Jan-Feb., 1913. Lbs.
United Kingdom ...	805,204	1,016,603	1,386,219	2,123,162
United States ...	574,394	1,301,192	816,553	1,693,660
Other Countries ...	273,080	257,601	429,870	516,515
Total Exports of rubber of domestic production ...	1,652,678	2,575,396	2,632,642	4,333,337

The Board of Trade Journal.

RUBBER.

Federated Malay States.

EXPORTS OF RUBBER IN 1912 AND IN JANUARY 1913: CORRECTION.

With reference to the notice on p. 464 of the "Board of Trade Journal" of 20th February last relative to the exports of cultivated rubber from the Federated Malay States in 1912, it is notified by the Commissioner of Trade and Customs at Kuala Lumpur that the total amount of rubber exported from the States in that year was 34,732,415 lbs. and not 34,718,015 lbs., as previously estimated. The difference of 14,400 lbs. has gone to the credit of Perak, the exports from that State being given as 10,486,689 lbs., instead of 10,470,289 lbs. This amount of 14,400 lbs., however, was erroneously included in the figure given as the export of rubber from Perak in January, 1913 (see p. 685 of the "Board of Trade Journal" of 20th March) and should read 1,236,298 lbs., instead of 1,250,698 lbs., thus making the total amount exported from the States in that month 4,772,880 lbs.—*The Board of Trade Journal.*

Brazil, Peru, Bolivia.

EXPORTS OF RUBBER FROM THE AMAZON BASIN, *via* PARA.

H. M. Consul at Para (Mr. G. B. Michell) reports that the quantity of rubber exported from Pará, Manaus, Iquitos, and Itacoatiara during the month of March and the three months ended March, 1912 and 1913, was as follows:—

	Fine. Kilogs.	Medium. Kilogs.	Coarse. Kilogs.	Caucho Kilogs.	Total, Kilogs.
March, 1912—					
To United States...	923,127	269,153	828,225*	644,050	2,664,555
To Europe ...	1,114,992	169,486	317,312	619,521	2,221,158
Total ...	2,038,119	438,486	1,145,537	1,263,571	4,885,713

March, 1913—

To United States...	774,920	119,531	601,034	298,531	1,794,016
To Europe ...	1,349,982	223,488	395,667	1,231,842	3,200,979
Total ...	2,124,902	343,019	996,701	1,530,373	4,994,995

1st Quarter, 1912—

To United States...	2,836,148	687,022	2,041,416	1,112,458	6,677,044
To Europe ...	3,944,109	463,729	952,110	1,715,972	7,075,920
Total ...	6,780,257	1,150,751	2,993,526	2,828,430	13,752,964

1st Quarter 1913—

To United States...	2,576,506	439,270	1,824,145	843,961	5,683,882
To Europe ...	4,076,557	711,953	864,381	2,793,177	8,445,168
Total ...	6,653,063	1,150,323	2,688,526	3,637,138	14,129,030

Kilog.—22046 lbs.

—*The Board of Trade Journal.*